

Will the Authors Corrupt

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Paget's disease, affecting the scrotum and penis.

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[With Plates XV and XVI.]



JAMES D—, a whitesmith, aged 60, attended University College Hospital first as an out-patient in April, 1887. On the front and left side of the scrotum and on the contiguous under surface of the penis there was an oozing, well-defined area of superficial ulceration. At first sight it was something like an eczema, but the lesion was deeper and more sharply defined than would be expected in that disease, and although there was no corroborative evidence, specific treatment was therefore tried thoroughly, but without any good effect. Various non-specific remedies in the shape of powders, lotions, and ointments were also tried, but without the slightest real benefit; the diseased area gradually extended, especially on the left side.

As the removal of the dressing was a long and painful process a complete examination of the disease was not made at each visit, but at the end of November two small nodules were observed in the excoriated area, which at once suggested the malignant nature of the affection, and he was admitted as an in-patient for the removal of it.

At that time the lesion extended over nearly the whole of the left half of the scrotum, except the posterior surface; above, it reached up to the pubes on the inside, over the whole part adjacent to the thigh, and in front, as far as could be seen without raising the scrotum.

On the right side it formed only a patch, separated below by sound skin from the affected left side, but joined to it above, where the penis and scrotum were in contact, the skin of nearly the whole of the under surface of the penis being also involved.

The general aspect remained the same, viz. a superficially ulcerated, easily bleeding surface, with well-defined borders, and here and there pearly-white islets, in which the epithelium had escaped destruction, while a serous discharge was constantly oozing from it. The nodules alluded to were situated close together on the left

side of the raphe. The largest began about seven weeks previously, and was then about half an inch in diameter, with a shallow fissure on its upper border; it was firm to the touch and covered with a yellow secretion.

The more recent and smaller nodule was the size of a large pea, and possessed similar characters to the other; neither these nor the raw surfaces were painful, except that the latter smarted and throbbed when first dressed. There were no enlarged glands in the neighbourhood. The patient was a healthy-looking, well-nourished man, and but for this affection had nothing to complain of. There was nothing in his occupation or habits which suggested a predisposing or exciting cause, and he himself stated that it began spontaneously in the summer of 1886 as a raw surface at the root of the penis and adjacent scrotum.

He was treated in vain by several doctors, and also attended at the Lock Hospital, where he was sent on to University College Hospital.

Prior to operative interference the man was shown to the Dermatological Society, where its similarity to Paget's disease was admitted by several of the members, and subsequently Sir James Paget kindly consented to see him, and concurred in its being analogous to the nipple disease identified with his name, and he recommended the removal of the whole of the diseased area. This was carried into effect on December 20th by my colleague Mr. Godlee, and although, owing to the large surface, the process of healing occupied some time, by February 6th it was so nearly accomplished that he was made an out-patient again until healing was completed. I saw him in July, when the cicatrix still remained sound, and the man gratefully expressed himself as quite well.

Microscopical investigation.—Portions of the excoriated skin and the two nodules were hardened in a fluid consisting of equal parts of one sixth per cent. chromic acid solution and alcohol, and afterwards in pure alcohol. The sections were stained in hæmatoxylin, and gave the following results:

The skin, which was simply ulcerated, had for the most part only a thin layer of epidermis left, and here and there even that was wanting, while on the other hand islets of epidermis, almost intact or somewhat thickened, were scattered about, but there was nowhere any notable downgrowth of the epithelium.

Below the epidermis the papillæ were obliterated, and the whole

structure of the upper part of the corium replaced by a dense infiltration of exudation-cells.

In the upper portion of the corium the cells were less dense, and were, for the most part, in lines perpendicular to the surface, and portions of vessels, sweat-ducts, and fibrous tissue could be seen between the cells. With the exception of occasional foci round vessels and sweat-coils, the exudation-cells ceased at about the level of the dartos. The rest of the tissues were healthy, except that in some of the sweat-coils there were signs of internal proliferation of the lining epithelium.

The large nodule showed in the greater part of the tissue a distinctly cancerous structure, consisting of alveoli containing small epithelial cells closely aggregated together, containing one or more nuclei. The general run of the alveoli were small and roundish, but some were much larger than the rest, and elongated or ovate; in these last the outermost cells had a radiate arrangement similar to those seen in rodent ulcer. There was great variety in the arrangement of the alveoli, and in the thickness of the walls in some parts the alveoli were so closely aggregated, and with so little intervening stroma, that it resembled encephaloid. In others the stroma between the cell-masses was much thicker, and the fibrous tissue more developed. In the greater part of the nodule the cancerous structure reached quite up to the surface, and was nowhere below the dartos, but here and there large cell-foci were buried in the deeper part of the skin or in the subcutaneous tissue; this condition was, however, much more marked in the small nodule.

The process of conversion of the sweat-coils and ducts into the cancerous structure could be distinctly made out in some sections, but it could not be determined whether this was primary or secondary. The larger masses were probably derived from the hair-follicles or sebaceous glands, but there was not such distinct proof of this as in the case of the sweat-coils. Where the epidermis was intact in the part adjoining the cancerous structure there was some thickening and slight downgrowth of the interpapillary portion, but nothing at all resembling epithelioma of the ordinary type.

In the smaller nodule the fully developed cancerous tissue structure was confined to a limited portion, but there were large alveoli, isolated or in twos and threes, very conspicuous in some

parts, deeply embedded in the tissue, and showing well the radiate arrangement of the outer epithelial cells. These, from their position, suggested an origin of hair-follicles and sebaceous glands as sweat-coils, more or less changed, could often be seen in their immediate neighbourhood. In the larger nodule the similar large foci of cells were more mixed up with the smaller cell-masses.

Cancerous disease of the scrotum is well known under conditions of chronic irritation from various occupations, such as that of chimney-sweeps, in the old days when they ascended chimneys, and in more modern times Volckmann has drawn attention to a similar occurrence in workers in tar or paraffin which, combined with want of cleanliness, lead to blocking up of the gland-ducts, and consequent inflammation. Under these circumstances, however, the primary inflammation is of a dry kind, leading to thickening and sealiness and fissuring, and the induced scratching and frequent tearing off of the scales and crusts play a not inconsiderable part in the production of the ultimate cancerous development, which always takes the form of epithelioma. An excellent summary of the inflammatory conditions under which this form of cancer is induced is contained in a paper by Schuchardt,¹ for reference to which I am indebted to Sir James Paget.

The case before us, however, differs from this class by the absence of anything in the man's occupation or history pointing to a chronic irritation, and also in the form of inflammation being a moist one, and clinically resembling the disease of the nipple, generally known as Paget's disease. The difference in the normal structure of the two parts may go far to explain the differences in the anatomy of the nipple cancer and the one before us. It is not easy to define the exact variety of cancer to which the case belongs.

It is certainly not an epithelioma in the ordinary sense, for it is clearly not derived from the epidermis, as there is total absence of the exuberant downgrowth of the epidermis, and the general structure differs notably from that form. The fibrous stroma is too abundant in some parts for encephaloid and too scanty in others for schirrhous. The general resemblance to rodent ulcer is striking, and there are strong grounds, moreover, for believing that the malignant change starts from the sweat- and sebaceous-glands

¹ 'Clinical Lectures,' edited by Volckmann, No. 257.

DESCRIPTION OF PLATE XV.

To illustrate Dr. Radcliffe Crocker's paper on Paget's Disease Affecting the Scrotum.

The whole patches on the raw surface are islands of epidermis, spared by the surrounding ulceration. The yellow masses are the two tumours described in the text. They were not yellow as depicted in the plate, but nearly the same colour as the rest.







b.

a.

c.

Fig. 1.

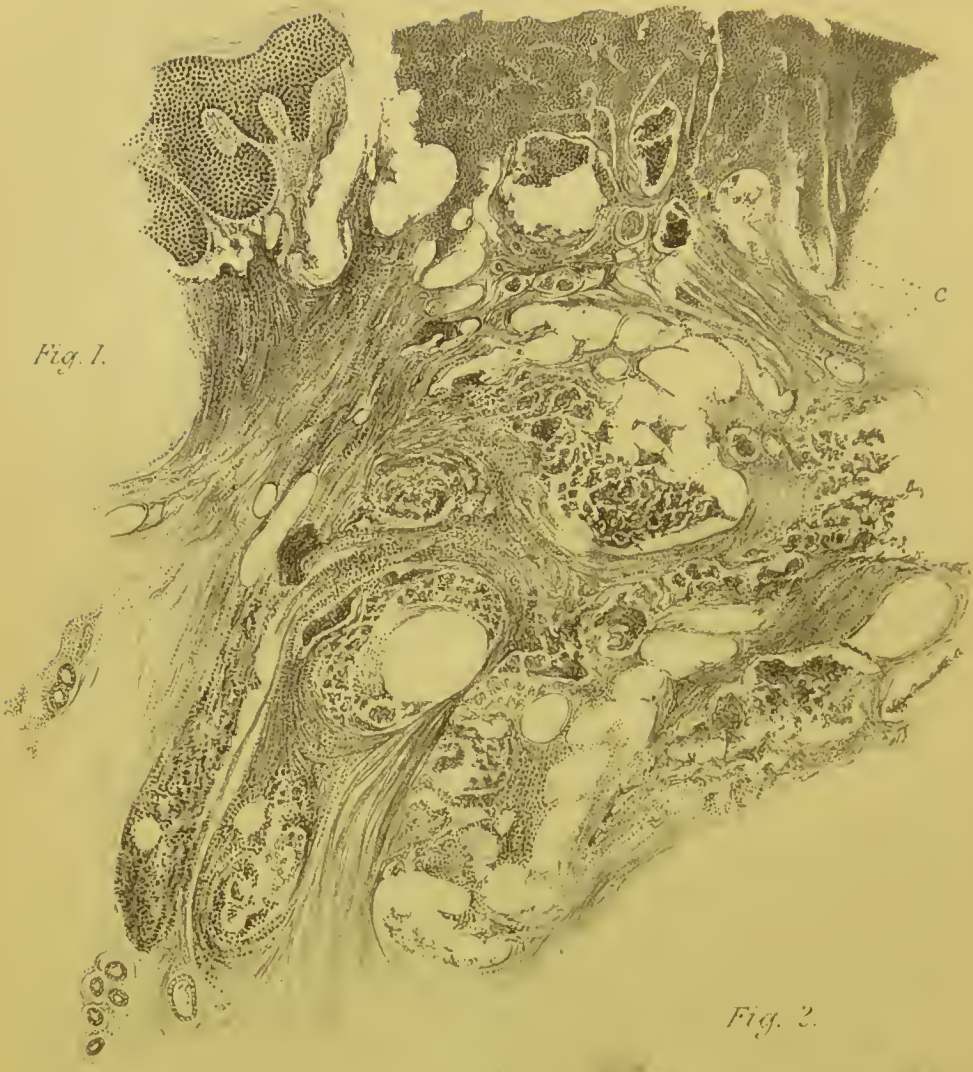


Fig. 2.

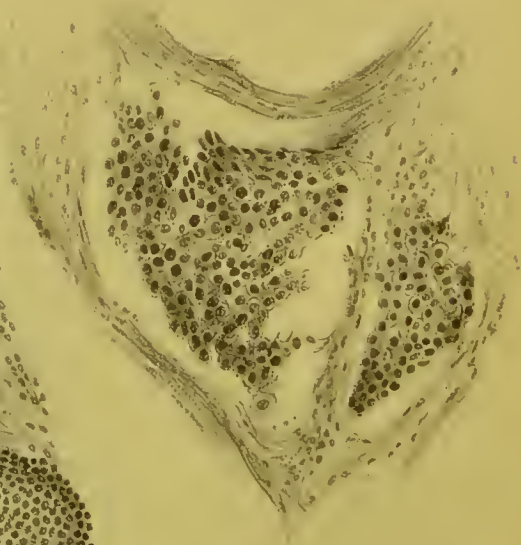
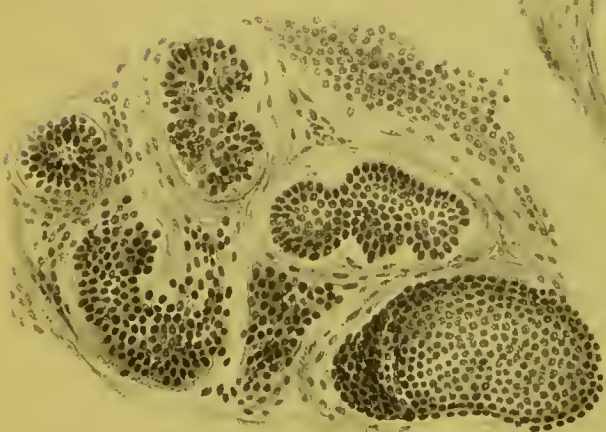


Fig. 3.



DESCRIPTION OF PLATE XVI.

To illustrate Dr. Radcliffe Crocker's paper on Paget's Disease affecting the Scrotum and Penis.

FIG. 1.—Portion of large nodule from the scrotum. Obj. 2 in., ocul. No. 3.

- a.* Epidermis still intact, with only moderate down-growth of the rete Malpighii.
- b.* Ulcerated part, showing only round-cell infiltration with dilated vessels at the surface.
- c.* Acini, with small epithelial-cell contents.

FIG. 2.—Two acini, with epithelial contents, more highly magnified. Obj. $\frac{1}{4}$, ocul. No. 3.

FIG. 3.—Sweat-coil, with commencing cancerous change. Obj. $\frac{1}{4}$, ocul. No. 3.

